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ABSTRACT

This booklet describes and evaluates the Economic Opportunity Atlanta Inc. Reading/Math Basic Skills Learning Center operating in 14 Atlanta public schools for approximately 1,200 low achieving pupils. The basic concept of the Learning Centers was to provide pupils with the opportunity to improve their basic skills in reading or mathematics through a program of individualized instruction. Through student controlled pacing of instruction, children were to move through the prescribed curriculum at an appropriate pace for maximun comprehension. High support counseling services were designed to assist the child and his/her parents. Through intensive counseling and casework, the family was assisted in the development of a home environment that would be conducive to improved educational and economic opportunities. The program was developed based on assumptions related to student success, both academically and in terms of adjustment to the educational experience. To determine the effectiveness of the Learning Centers and the High Support counseling program, two evaluation processes were conducted. Throughout the year, the program operations were monitored and reported in quarterly reports. In addition, the research component of the pilot program was conducted through the implementation of behavioral objectives. These measures were specified to provide data related to student achievement, attendance, and attitude towards school. These, as well as recommendations for changes to be made in the administrative assessment procedure are listed. (Author/AM)

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RESEARCH AND EVALUATION REPORT

Vol. X, No. 3 September, 1976

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END-OF-YEAR REPORT — 1975-76
EOA READING/MATH BASIC SKILLS LEARNING CENTERS

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FINAL REPORT
EOA READING/MATH BASIC SKILLS LEARNING CENTERS

PROJECT DESCRIPTION

The Atlanta Public Schools received a Federal Grant of one million dollars in conjunction with Economic Opportunity Atlanta, Inc. (EOA) to develop Basic Skills Learning Centers. The funds were provided by the Community Services Agency to be utilized in a thirty-month pilot project. The grant provided for the establishment and operation of learning centers in fourteen Atlanta Public Schools for approximately 1,200 low-achieving pupils. Economic Opportunity Atlanta, Inc. was financially and operationally responsible for the High Support Services component of the project which provided intensive counseling for 100 of the Learning Center students.

The basic concept of the Learning Centers is to provide pupils with the opportunity to improve their basic skills in reading or mathematics through a program of individualized instruction. Through student-controlled pacing of instruction, the child should be able to move through the prescribed curriculum at an appropriate pace for maximum comprehension. The High Support Services were designed to assist the child and his/her parents. Through intensive counseling and casework, the family was assisted in the development of a home environment that would be conducive to improved educational and economic opportunities. EOA was responsible for the development and coordination of these services during the first year of project operations.

The program was developed based on assumptions related to student success, both academically and in terms of adjustment to the educational experience. The cost effectiveness of the selected management system was also an important component of the program design. The assumptions that were assessed in the project evaluation included the following:

A. Pupil improvement in reading/mathematics skill mastery due to the use of a management system.

B. Pupil improvement in self-concept, attendance, and academic performance due to participation in the High Support Services component of the Learning Center program.

C. The cost effectiveness of the Learning Center approach to skill mastery in a comparison with other educational centers operating within the Atlanta Public Schools.

D. The total cooperation of teachers, pupils, and parents in facilitating the successful operation of the Learning Center program.

The Reading and Mathematics Learning Centers program and the High Support counseling component were designed to yield maximum services to students and also to provide research on the effectiveness of this educational approach. The general objectives or goals of the program describe the major areas of concentration. They were as follows:

A. To increase the educational opportunities of children from low socioeconomic backgrounds by providing intensive reading and mathematics Learning Center services.

B. To improve the self-concepts, attitudes towards school, and performance levels of Learning Center pupils through High Support services provided by Economic Opportunity Atlanta counselors.

C. To develop a cost effective Learning Center approach to reading and mathematics which can be applied to pupils with diversified achievement levels and varying socioeconomic backgrounds.

To determine the effectiveness of the Learning Centers and the High Support counseling programs, two evaluation processes were conducted. Throughout the year, the program operations have been monitored and reported in quarterly reports. In addition, the research component of the pilot program was conducted through the implementation of behavioral objectives. These quantifiable measures were specified to provide data related to student achievement, attendance, and attitude towards school.

The following report and summative data have been prepared to provide both an operational assessment and the research findings related to the 1975-76 Learning Laboratory Program.

PROGRAM OPERATIONS

Site Selection

The process of identifying the schools in which the Learning Centers were established resulted from the mutual efforts of the Atlanta Public Schools and Economic Opportunity Atlanta, Inc. (EOA). Criteria for school selection were developed by the Instructional Division of the Atlanta Public Schools and approved by EOA.

Criteria For Selecting Schools For Basic Skills Learning Centers' Program

A. Schools must have at least 120 pupils from low-income families to be considered.

B. Schools already engaged in other special programs designed to improve basic skills mastery shall be excluded.

C. Schools having lowest mobility indices shall be selected.

D. Standardized test scores must reflect that pupils are operating at least two years or more below grade level in reading and/or math.

E. Centers may be located in elementary, middle, or secondary schools.

F. Schools must be located within an EOA designated area of Atlanta.

The Atlanta Public Schools administration then recommended possible sites for the centers. An approval process involving the EOA Education Subcommittee and EOA community groups was conducted. After all community members had been given an opportunity to discuss and amend the recommendations, the final school selections were approved by the Atlanta Public Schools administration and the EOA Board of Directors.

Table I lists the fourteen schools identified as the Community Services Agency Project schools. Five of these schools were then selected by EOA for the High Support counseling component of the program. A list of alternate schools was also developed.

TABLE I

LEARNING LABS BY SCHOOL AND BY ADMINISTRATIVE AREA

School	Program	Area
Clement Elementary	Math Lab	I
Connally Elementary	Reading Lab High Support	I
Grove Park Elementary	Math Lab	I
Long Middle	Reading Lab	II
Center Hill Elementary	Reading Lab High Support	III
Chattahoochee Elementary	Reading Lab	III
Garden Hills Elementary	Reading Lab	III
Woodson Elementary	Reading Lab	III
O'Keefe Middle	Reading Lab	III
Sutton Middle	Math Lab	IV
Jerome Jones Elementary	Reading Lab High Support	IV
Kirkwood Elementary	Reading Lab High Support	IV
Bass High	Reading Lab	IV
Smith High	Math Lab High Support	IV

2-

The Learning Labs were established and operations began in the fourteen schools in September 1975. Each school was to identify 120 participants for the program. Due to the low enrollment at Garden Hills Elementary School, the staff was not able to identify a sufficient number of eligible pupils to operate a cost effective laboratory. The lab was operating at approximately 66-2/3 per cent of full capacity.

To fulfill the federal participant requirements of the Learning Laboratory program and to serve most effectively the educational needs of the total student population, the School System recommended that the Center at Garden Hills be removed. It was proposed that a Reading Laboratory be established at the next school on the alternative list, Harper High School, Area I. EOA was informed that the change could be made quickly and without the need for additional funds. Approval was given by the EOA Administrative Division and the Education Subcommittee. By the second quarter of the school year, December 1975, the lab was in operation at Harper High School.

Student Selection

Selection of program participants was based on criteria established by the Atlanta Public Schools. Within each designated school, students were identified for remedial services from an evaluation of their system-wide test scores. In the elementary and middle schools, pupils scoring two years below grade level on the Iowa Tests of Basic Skills (ITBS) were eligible for Center participation. For the reading program selection, reading comprehension and the reading total ITBS scores were utilized. Math Center participants were assessed by the ITBS math total scores.

In the high school Centers, students were selected by available ITBS scores. In some instances, older students were designated as eligible by their scores from the Tests of Academic Progress (TAP). High school students ranking below the 25th percentile in reading or mathematics were identified for the Learning Center programs.

Each school was to identify 120 eligible pupils for program participation. A list of alternate students was also required to assist in the maintenance of programs at full enrollment. Teachers and school administrators were also given the option of including pupils in the program based on their professional opinion. Even if the achievement scores were not two years below level, a student with a need for remediation could be included in the Learning Laboratory. Table 2 indicates the number of participants by school who were above the initial eligibility level.

TABLE 2

PERCENTAGE OF STUDENT SCORES ABOVE
INITIAL ELIGIBILITY REQUIREMENTS

School	Program	Percentage of Initial Enrollment September 1975	Percentage of Final Enrollment January 1976
Elementary			
Center Hill	Reading	49.6	52.8
Chattahoochee	Reading	21.5	21.3
Clement	Math	30.2	31.6
Connally	Reading	52.5	52.5
Grove Park	Math	35.9	39.3
Jones, Jerome	Reading	55.6	50.0
Kirkwood	Reading	68.1	72.3
Woodson	Reading	14.4	14.4
Middle Schools			
O'Keefe	Reading	2.6	2.5
Long	Reading	8.2	8.8
Sutton	Math	27.5	17.9
High Schools			
Bass	Reading	1.0	0.8
Harper	Reading	--	--
Smith	Math	1.0	0.9

Note: Middle school and high school scores may not be representative since test data were not available for many of these participants.

The students selected for Learning Lab participation at the fourteen schools were all identified by achievement scores or educational referral. Although the eligibility requirements were flexible, appropriate identification of students occurred. A review of the mean age achievement quotient (AAQ) by Learning Lab demonstrated the need for remediation of program participants. (See Table 3.)

TABLE 3

AGE ACHIEVEMENT QUOTIENT MEAN AND
STANDARD DEVIATION FOR
LEARNING LABS BASED ON
1974-75 IOWA TESTS OF BASIC SKILLS SCORES

School	Number of Participants	Mean	Standard Deviation
Elementary School Total	864	83.61	10.72
Center Hill	109	84.74	9.74
Chattahoochee	102	84.55	14.30
Clement	113	82.95	11.59
Connally	112	84.72	9.14
Grove Park	117	79.63	9.70
Jones, Jerome	83	85.85	9.76
Kirkwood	112	88.01	10.26
Woodson	116	79.44	7.58
Middle School Total	310	75.77	27.16
Long	98	72.58	10.27
O'Keefe	100	76.67	44.92
Sutton	112	77.76	12.18
High School Total	50	65.60	10.18
Bass	7	72.99	7.54
Smith	43	64.40	10.10
GRAND TOTAL	1,224	80.88	17.15

Note: The scores presented are based on pupil enrollment as of December 1975. The number of students listed does not represent lab enrollment but is the available AAQ scores for students by school. Harper High School did not have current ITBS scores since most participants were tenth graders or above.

The age achievement quotient (AAQ) was computed for each participant by converting the student's grade equivalent achievement score with an age equivalent score. If a student's test performance was exactly the same as the average test performance of students of the same age, the student's AAQ would be 100. An AAQ above 100 indicates that a student's test score was higher than the average test score of others of comparable age. An AAQ below 100 means that the student is scoring lower than most other students of the same age.

In the five schools designated as recipients of the High Support counseling program, twenty students at each were to be selected. The pupils were identified by the Lab teachers and school principals through consultation and staff referrals. Criteria for selection included factors such as pupil attendance, pupil behavior, home environment, socioeconomic background, and receptiveness of pupils to participation. Prior to the implementation of the counseling activities, the EOA counselors met with the respective parents or guardians of the identified students to explain the project and to secure their signature on a parental permission form.

Participant mobility was also an important factor in program operations. The population of the Atlanta Public Schools is highly mobile. For 1975-76 the student mobility figure was 28 per cent for the elementary schools, 22 per cent for the middle schools, and 25 per cent for the high schools.

Based on similar past mobility trends, it was anticipated that there would be considerable turnover in the Learning Laboratory enrollment. An analysis of mobility trends within the program does indicate some changes; however, total program participant mobility was 10.8 per cent. (See Table 4.) Compared to the system-wide figure of 27 per cent, it can be concluded that the labs had less student mobility than the total system operations. The relationship between the Learning Labs and student stability can only be speculative. Further research may be able to determine if lab participation has, in fact, affected school withdrawal patterns. Consideration could also be given to the economic problems related to mobility. It is possible that family counseling might identify certain needed services and could be expanded to assist all lab participants.

TABLE 4

ENROLLMENT AND MOBILITY PERCENTAGES
FOR LEARNING LAB SCHOOLS

School	Initial Enrollment	Number Withdrawals	Per Cent Mobility	Final Enrollment
Elementary School Total	922	93	10.1	908
Center Hill	117	17	14.5	103
Chattahoochee	121	20	16.5	122
Clement	119	10	8.4	117
Connally	118	8	6.8	118
Grove Park	117	7	5.9	117
Jones, Jerome	99	8	8.0	94
Kirkwood	113	14	12.4	119
Woodson	118	9	7.6	118
Middle School Total	359	37	10.3	349
O'Keefe	117	7	5.9	118
Long	122	12	9.8	114
Sutton	120	18	15.0	117

School	Initial Enrollment	Number Withdrawals	Per Cent Mobility	Final Enrollment
High School Total	319	43	36.1	347
Bass	103	24	23.3	124
Harper	117	--	--	117
Smith	99	19	19.1	106
PROGRAM TOTAL	1,600	173	10.8	1,604

Note: High school and total program mobility figures do not include Harper High School.

The High Support counseling students were considered to be a population that would be subject to high mobility. By the nature of the project, many of the pupils who were identified for participation would have difficulty maintaining stability in their school and home environment. One of the goals of the EOA High Support counseling project was to assist these students and their families to develop coping behaviors and strategies which would enable them to have more control over their environment.

The information provided in Table 5 does not identify any major trends in High Support counseling participant mobility. The research hypothesis developed in relation to this program (see Objective B) will be able to assess the project effectiveness. t can be concluded, however, that the mobility for this high risk group did not differ greatly from the mobility trends identified for the Learning Lab participants.

TABLE 5

ENROLLMENT AND MOBILITY PERCENTAGES
FOR HIGH SUPPORT STUDENTS

School	High Support Mobility	Learning Lab Mobility
Center Hill Elementary	16.7	14.5
Connally Elementary	0	6.8
Jones, Jerome Elementary	12.5	8.1
Kirkwood Elementary	5.3	12.4
Smith High School	20.1	19.1

The reasons for withdrawal from the Learning Lab and High Support counseling project are given in Table 6. These data provide an overview of the student population. The large majority of these pupils left the program because of mobility. Over 50 per cent of the participants who did not complete the year in the labs were withdrawn or transferred from their schools. This finding may have identified areas for possible counseling and High Support services-intervention. The development of additional strategies to decrease the Learning Lab mobility rate would assist students in obtaining the full program of prescribed remediation.

TABLE 6

REASON FOR WITHDRAWAL FROM PROGRAM

Reasons	Learning Lab		High Support	
	No.	Per Cent	No.	Per Cent
Transfer	25	13.0	4	33.3
Learning problem (EMR or LD)	25	13.0	3	25
Moved to another project	23	11.9	--	--
Achievement level too high	17	8.9	3	25
Deceased or ill	2	1.0	--	--
Moved	46	23.9	--	--
Withdrawn (reason not stated or nonattendance)	30	15.6	1	8.3
Rescheduled	8	4.2	1	8.3
Other	7	3.7	--	--
Incomplete records	9	4.7	--	--
Total	192	99.9	12	99.9

Specification for Learning Centers

The specifications for selection of a management system were developed by instructional personnel from the Atlanta Public Schools. The program was to be directed towards basic skills mastery and had to utilize an individualized instructional approach.

A committee of parents, teachers, curriculum specialists, EOA Education Subcommittee members, and educational administrators was formulated to evaluate the bids in the selection of a contractor. The final recommendations were not accepted until concerned parents/residents had an opportunity to review the committee's findings.

The Reading and Mathematics Centers selected were to be ones which permitted a teacher to provide individualized instruction for large numbers of pupils. Both the reading and mathematics centers were to provide management systems which included the following:

1. Placement tests.

2. Diagnostic instruments.

3. Individual prescriptions for pupils based on diagnosis.

4. Interesting materials.

5. Motivation of pupils.

6. Classroom management (individual study stations).

7. Training for teachers.

8. Continuous support for teachers.

9. Instant confirmation of pupil progress.

10. Continuous progress for pupils.

11. Easy to use pupil records (that do not require master teachers).

The contract was awarded to the Prescription Learning Corporation after the bids from companies had been reviewed. The primary objective of Prescription Learning is to provide individual educational institutions with the capability of diagnosing accurately and quickly the individual deficiencies and strengths of its students. The second is to prescribe an individualized learning approach, known as a prescription, that specifically lays out a learning program for that student, based on his or her needs. The third is to provide for each school a facility, known as a Lab, where the prescription or learning program can be performed and evaluated.

Staff Selection

The staff needed for the administration and operation of the Learning Centers were selected in accord with the designated job descriptions. (See Appendix A.) The program director and the reading and the mathematics coordinators assisted local principals in selecting qualified teachers to operate the Labs. The identified personnel were paid through funds provided by the Atlanta Public Schools, Economic Opportunity Atlanta, Inc., and the grant provisions from the Community Services Agency.

During the first year of project operation, the Atlanta Public Schools Learning Center Program's administrative and teaching staff experienced few changes. The only transfer of staff occurred among the lab teachers. Two initially assigned lab teachers were replaced by substitutions. In these two cases at Chattahoochee Elementary School and Woodson Elementary School, the original teachers were reassigned to other federal projects, Emergency School Aid Act (ESSA) and Title I, in which they had previously worked. A teaching reassignment also occurred when the Reading Center was moved from Garden Hills Elementary School to Harper High School in December, 1975. One staffing problem occurred at Center Hill Elementary School. There was a two-month delay in the release of the Learning Lab teacher from her regular classroom responsibilities. By November 1975, she was able to function full time in the lab situation. No difficulties or staff changes existed with the aides who had been trained to assist in the learning labs and to function as members of the educational team.

Staff Training

Teachers and aides selected for the Learning Centers were given intensive in-service training prior to opening the Centers. The Prescription Learning Corporation was responsible for the planning and development of all training as specified in the contractual agreement. The preservice training provided a thorough understanding of all instructional techniques, learning concepts, and operational procedures, materials, and equipment to be used in the Centers.

The training and orientation to the Prescription Learning Laboratories were also made available to other staff involved in the program. Principals of participating schools were requested to attend a one-half day orientation session.

The EOA High Support counselors also were invited to attend the preservice sessions. This enabled them to become familiar with the Center operations, the teachers, and the other School System personnel prior to project implementation.

During the year, three in-service sessions were held for teachers and aides. The Prescription Learning staff structured these meetings with the assistance of the project's administrative personnel. These workshops provided both a review and follow-up on Center operations as well as presentations by guest speakers on related topics. The educational component included theories of learning, the relationship between health and academic performance, novel instructional techniques, and the introduction of motivating games. Areas of concern and necessary procedural instructions identified by the Program Director and Coordinators were discussed during these meetings. Another function of these workshops was to provide teachers and aides with the opportunity to share their experiences and to receive feedback on their particular operations.

SCHEDULE AND FUNCTION
OF PRESCRIPTION LEARNING WORKSHOPS
FOR 1975-76

Participants	Date	Workshop Function
Lab Teachers	8/26/75 - 8/29/75	Description of Learning Center Concept
Lab Aides		Lab Set-Up
EOA Counselor		Learning Modes —
Administrative Staff		Team Building
Principals of Learning Lab Schools	10/6/75	Prescription Learning Concept Lab Operations
Administrative Staff		Program Operations
Lab Teachers	10/27/75	Health and Academic Performance

Participants	Date	Workshop Function
Lab Aides		Lab Operations
Administrative Staff		Equipment Review Innovative Games Program Operations
Lab Teachers Lab Aides Administrative Staff	3/10/76	Human Relations Program Operations
Lab Teachers Administrative Staff	5/26/76	Closing out Labs

The Learning Center teachers were responsible for the implementation of orientation programs within their schools to inform the faculty of the Centers' purposes and procedures. Methods of student selection and the referral process were also explained. Faculty meetings held during the early part of the school year presented an excellent opportunity for those informal presentations. Staff at the participating schools were also invited to visit the labs during the regular school day to observe the program in operation.

Parent Involvement

The Learning Center Program utilized parents in both a supportive and decision-making capacity during the initial year of operations. Throughout the planning of the project, parents and residents were involved in the selection of the Center sites. Their input was received through the EOA Education Subcommittee recommendations and the input of local school-parent groups. The committee for the selection of the bid for the Learning Center contract included both resident members of the EOA Education Subcommittee and parents of pupils enrolled in the Atlanta Public Schools. The recommendation to award the contract to the Prescription Learning Corporation was not accepted until concerned parents/residents had an opportunity to review the committee's findings.

At the beginning of program establishment, parents were given an opportunity to visit and observe the Centers. At each participating school, an open house was held for parents and students. In addition, the Centers were open for visitation throughout the program period. Teachers and administrators encouraged parents to observe the Center in operation and an informal system of parent/teacher communication was established in many of the schools. The EOA High Support services also encouraged the cooperation between home and school. Through their interest and concern, parents helped to facilitate the establishment of a totally supportive environment for pupil learning.

The Atlanta Public Schools presented the Learning Laboratory concept to the EOA Central Citizens Advisory Council on November 4, 1975 at Kirkwood Elementary School. The program provided EOA representatives and School System administrative staff with an opportunity to visit a Reading Lab, operate the equipment, and study the individual pupil learning prescriptions. During the presentation and at the following informal sessions, community members interacted with System staff and were able to develop first-hand impressions of the program.

The EOA Prescription Learning Advisory Council was organized to further improve the communication process between parents/residents and the program staff and administration.

The Advisory Council consists of two parent representatives per school; these individuals were recommended by local principals and teachers. (See Appendix B.) The first meeting of the Council was held on April 28, 1976 at the EOA complex at Kennedy Middle School. The Council members decided to hold quarterly meetings and elected a chairperson and a recording secretary. The Council defined its role as both an information-seeking body and an advisory group. The members of the Council plan to play an active role in determining future directions of the program and in assessing ongoing operations.

Instrumentation

Computational and data management functions were performed by the Atlanta Public Schools, Computer Center, using an IBM 370/158 (virtual) machine. Direct data access and storage were accomplished through the Computer Center's spindles (IBS-3330's). Additional storage of students' ID numbers was accommodated through magnetic tape which will permit longitudinal analysis of participant achievement. Programming was performed through COBOL and FORTRAN (for batch processing) and through APL (for interactive applications).

Testing

Iowa Tests of Basic Skills

For evaluation purposes, the Iowa Tests of Basic Skills (ITBS) was administered to all participants and control group members. It is a standardized achievement test published by the Houghton Mifflin Company in 1971. Rather than being a measure of overall reading achievement, it provides for comprehensive and continuous measurement of individual pupil growth in a series of basic skills related to reading and mathematics achievements, thus, providing discrete analysis of a student's strengths and weaknesses.

The ITBS is a battery of 11 separate tests organized into the categories of vocabulary, reading comprehension, language skills, work-study skills, and mathematics skills. Raw scores for each of these subtests have been gathered on a national sample of pupils representing all grade levels and geographical areas. These raw scores were then standardized so that for any raw score, the median grade level of the pupils in the national sample making that raw score can be determined. Using this process, the student's performance in any area can then be compared against national, state, and local norms. The validity of the ITBS was established through comparison of curricula of various school systems across the country with the content of the test. The congruence of the two were found to be extremely high. Reliability was obtained by use of the Split-half reliability technique corrected for length. These measures yielded a coefficient of .92 which is considered extremely adequate.

In the Learning Center study, two skill areas were utilized for the major program assessment. Those students who participated in the Reading Center were evaluated by their reading comprehension score gains from one year to the next. A comparison with nonparticipants as well as a program versus system-wide gain was also computed. Similarly, the Mathematics Centers' students were evaluated using the Math Skills segment of the ITBS. The following paragraphs offer a brief description of the ITBS in those two areas.

Test R: Reading Comprehension

Three reading subtests are employed. R-1 is a test of picture interpretation. The stimulus pictures are of explicit and implied actions and relationships. In Level 7, two types of items are employed. The first consists of questions about the pictures which can be answered yes or no. The second involves the selection of a word which fits the context of an incomplete sentence and makes the sentence true. Only the latter type of item is employed in Level 8.

R-2 in both levels is a test of sentence comprehension. It consists of questions which can be answered yes or no. Vocabulary has been carefully controlled by using only words that occur in a majority of current reading series. The skill that is being measured is, therefore, the understanding of relationships expressed in simple vocabulary.

R-3 is a test of story comprehension. It consists of several passages with multiple-choice questions about each one. The passages offer a range of difficulty appropriate to the entire range of reading achievement in the primary grades. Emphasis is upon understanding the idea expressed or implied in the passage.

Test M: Mathematics Skills

1. Mathematics Concepts

   The test of mathematics concepts parallels closely the grade placement of, and relative emphasis upon, mathematics concepts presented in current instructional materials. A page-by-page examination of all of the leading current textbook series found the basis for the skills classification system employed and for content and placement specifications.

2. Mathematics-Problems

   The test of mathematics problems involves the application of mathematics concepts in the solution of practical quantitative problems. The tests are orally administered. Basic computation facts are systemically sampled.

Criterion-Referenced Tests

To determine the pupil achievement in the Learning Centers operating in the high schools, it was necessary to employ an alternate assessment instrument. The ITBS is not designed for secondary school students and is not a part of the high school testing program. In the Prescription Learning Program a criterion-referenced test (CRT) was administered to pupils to determine their initial level of placement in reading or mathematics.

This test is designed to focus in on the concept of mastery, that is, measuring instruments constructed to yield measures directly interpretable in terms of specified performance standards. The mastery test determines if pupils have accomplished the basal competencies presented in the programmed instruction. The instrument can also be utilized as a pretest-posttest measure of pupil gain.

At Bass High School and Smith High School, pupils who had initially been enrolled in the program were retested with the Plasment Test to determine their achievement growth. It was not possible to assess those high school students who were transferred into the Labs during the year since pretest scores were not available. Consequently, the high school evaluation includes approximately 60 per cent of the participants at Bass and Smith high schools. Since Harper High School did not begin lab operations until December 1975, it was not feasible to include those students in the first year of evaluation.

Attitude Testing

The High Support services program was developed to assist students who were having difficulty functioning within the school environment. In the evaluation of this component, a pretest-posttest measure of pupils' attitude towards school was utilized. The Survey of School Attitudes was administered to a sample of High Support participants and to two control groups of comparable students. Both the primary and intermediate forms of the survey were employed dependent upon the grade level of the students.

The instrument is designed to measure student reactions to four major areas of the school curriculum: reading and other language arts, mathematics, science, and social studies. Students indicate whether they like, dislike, or are neutral toward different activities in these areas. The sum of a student's responses to a sample of activities typically encountered in a curricular area is considered an indication of the student's overall affective reaction to that area. Twelve items were added to the test by the EOA counselors to measure social and environmental attitudes.

Reporting-Monitoring Procedures

Services from the Division of Research and Evaluation were provided for reporting and monitoring of the Learning Center operations. These included the services of research assistants and a statistician as necessary for data collection and analysis, dissemination of information, and liaison activities. Quarterly reports on Center operations, ongoing progress, and operational changes were disseminated to EOA and School System personnel by the Division of Research and Evaluation. The Division had primary responsibility for the liaison with the funding agency, submitting necessary reports, documentation, and monitoring of operations.

The Division of Research and Evaluation assigned personnel to the project to design and implement the evaluation activities. The Division also served as a source of information and feedback to both the project staff and all departments of the School System concerning the operation of the

project. During the planning phase of the project, the Division of Research and Evaluation worked with the school administration, instructional personnel, and EOA representatives in developing the formal proposal for program implementation. As the project continues, Research and Evaluation staff will continue to conduct an ongoing evaluation of the Learning Centers' activities as well as the presentation of the annual evaluation.

All phases of the program are being carefully documented with regular published reports and materials, so that the program can be replicated easily and quickly by others. In addition, information concerning the program is disseminated among the lay community as it is the policy of the School System to keep the community informed of its activities.

Responsibilities

The Atlanta Public School System is responsible for all evaluation of the Learning Centers' operations. The monitoring and evaluation of EOA High Support services was conducted in conjunction with the overall research plan. The designated Research and Evaluation staff assisted in the implementation of the evaluation plan by EOA personnel.

RESEARCH COMPONENT

The research component of the pilot program was conducted through the establishment of behavioral objectives. These quantifiable measures were specified to provide data related to student achievement, attendance, and attitude towards school. Each objective was assessed with the information obtained from the first year of program implementation.

Objective A1: The achievement gain for Learning Center participants will be significantly greater (.05) than the system-wide achievement gain.

Evaluation: A comparison of Learning Lab and system-wide ITBS gains was made to determine if there was a significant difference (.05) in the sets of scores. The data in Table 7 indicate that in both reading and mathematics, Learning Center participants did not exhibit greater improvement in their ITBS scores than the system-wide average. The Reading Lab participants gained an average of five months in skill mastery as measured by their Reading Comprehension scores. The average reading scores for the System reflects similar growth. Lab participants showed comparable improvement in their mathematics ITBS scores with students in the regular system instructional program. In mathematics, participants also gained one-half year in skill mastery while the system-wide average demonstrated six months of growth.

TABLE 7

COMPARISON OF LEARNING LAB AND
SYSTEM-WIDE ITBS GAINS
GRADES 1-7
(First Year Data)

Group	Number Matched Scores (Per Group)	1974-75 Grade Equivalent	1975-76 Grade Equivalent	Gain In Months
Reading Lab Total	775	3.0	3.5	0.5
System-Wide Total	49,000	3.2	3.8	0.6
Math Lab Total	317	3.6	4.1	0.5
System-Wide Total	49,000	3.2	3.8	0.6

For the first year of Learning Laboratory operations, it can be concluded that the achievement gain for Learning Center participants was not significantly greater (.05) than the system-wide achievement gain. The program participants were selected based on low ITBS scores and a demonstrated need for remediation. These initial data demonstrate two important learning outcomes — lab students were able to function effectively within the program, and they showed an increase in their ITBS scores. The trend of continual score decline for low achievers is not evident with this population. The scores also indicate the importance of a plan of individualized instruction for these students. Learning Lab students experienced growth in skill mastery that was also exhibited in the ITBS scores for the total School System.

Objective A2: Participants in the Learning Centers will show a gain of one month for each month of participation in the program in respective areas of reading comprehension or mathematics as measured by the Iowa Tests of Basic Skills (ITBS).

Evaluation: The gain in reading or mathematics was computed for each participating school. In the elementary and middle schools, the ITBS was used to ascertain pupil growth. The Learning Labs were in actual operation from October 1975 through April 1976. Prior to October, pupils were being diagnosed and were awaiting their individual prescriptions. After April, lab operations continued, but ITBS testing had been completed. For research purposes, the Learning Labs can be considered to have provided approximately seven months of instruction

In reading comprehension, elementary and middle school participants gained an average of five months growth. (See Table 8.) To achieve the stated objective, a gain of seven months was needed. In the five Reading Learning Labs in the elementary schools, the average gain was six months or approximately 86 per cent of the anticipated goal. The middle schools exhibited minimal growth in reading. One lab measured an average of three months gain in skill mastery, while the other program did not demonstrate any gains. The overall accomplishment for the middle school reading program was 29 per cent of the stated objective.

TABLE 8

READING LEARNING LABS
GAINS IN ITBS SCORES

Group	Number Matched Scores	1974-75 Grade Equivalent	1975-76 Grade Equivalent	Gain In Months
Elementary Schools				
Center Hill	101	3.2	3.5	0.3
Chattahoochee	96	3.1	3.6	0.5
Connally	113	2.9	3.3	0.4
Jones, Jerome	68	2.7	3.3	0.5
Kirkwood	112	2.9	3.9	1.0
Woodson	116	3.0	3.5	0.5
Total	606	3.0	3.5	0.5
Middle Schools				
Long	86	2.9	3.0	0.1
O'Keefe	83	3.2	3.6	0.4
Total	169	3.1	3.3	0.2
Program Total	775	3.0	3.5	0.5

The Mathematics Learning Centers were instrumental in improving participants' skills in this area. (See Table 9.) In the two elementary schools, pupils showed an average gain of five months, while the middle school lab demonstrated an average increase of three months. The development of the comprehension of mathematic concepts and the ability to perform accurate compilations is a sequential process. In the Lab Program, pupils did not obtain the predicted seven months growth in skill mastery, but they gained an average of five months or 71 per cent of the objective.

TABLE 9

MATHEMATICS LEARNING LABS
GAINS IN ITBS SCORES

Schools	Number of Pupils	1974-75 Grade Equivalent	1975-76 Grade Equivalent	Gain In Months
Elementary Schools				
Clement	104	3.3	3.8	0.5
Grove Park	112	3.3	3.8	0.5
Total	216	3.3	3.8	0.5
Middle Schools				
Sutton	89	4.3	4.6	0.3
Program Total	305	3.6	4.1	0.5

The age achievement quotient (AAQ) was also analyzed for changes that may be related to Learning Program participation. The findings reported in Table 10 indicate that all but one of the lab schools did not report positive changes in AAQ. These negative changes do not mean that students did not exhibit growth in skill mastery. These participants' AAQ scores show that they are still not performing at a mastery level comparable to the average level for all students of their age. While enrollment in the Labs is aiding pupils to achieve an average of five months growth in reading comprehension, they are still performing considerably below their age level. The reported gains for low achievers in the Labs for one year are not of a large enough magnitude to raise them to the average AAQ.

TABLE 10

CHANGES IN AAQ
FOR LEARNING LAB SCHOOLS
WITH PUPIL DISTRIBUTION

Schools	Grade Distribution by Percentage 1-3	4-6	7	Number of Pupils	AAQ 74-75	AAQ 75-76	Changes in AAQ
Reading Labs							
Center Hill	--	98.0	0.2	101	84.8	79.4	-5.4
Chattahoochee	--	100.0	--	96	83.9	80.3	-3.6
Connally	--	100.0	--	113	84.7	80.9	-3.8
Jones, Jerome	--	98.5	1.5	68	85.2	82.4	-2.8
Kirkwood	11.6	88.3	--	112	88.6	89.8	1.2
Woodson	--	100.0	--	116	80.3	77.6	-2.7
Long Middle	--	--	100.0	86	73.0	67.7	-5.3
O'Keefe Middle	--	--	100.0	83	72.5	68.6	-3.9

Schools	Grade Distribution by Percentage 1-3	4-6	7-	Number of AAQ Pupils	AAQ 74-75	AAQ 75-76	Changes in AAQ
Math Labs							
Clement	7.6	65.4	26.9	104	84.2	81.5	-2.7
Grove Park	--	78.6	21.4	112	84.0	80.9	-3.1
Sutton Middle	--	--	100.0	89	81.5	77.4	-4.1

Note: Changes in AAQ were based on the number of matched scores and represent average differences.

To assess the achievement of participants in the high school Learning Labs, the criterion-referenced test developed by Prescription Learning Corporation was utilized. Bass High School students were evaluated in reading skill mastery, and Smith High School Lab pupils were assessed by the math skill mastery test. Based on the available data, two general observations can be made:

1. A great number of the high school Learning Lab participants fall in the bottom 50 percentile of students in their grade.

2. Seventy-two per cent of the Learning Lab high school participants have made significant gains (.05) as measured by the criterion-referenced pretest and posttest.

A further breakdown of the data provided by Prescription Learning Corporation was calculated at the two schools in their respective areas of concentration. This information is reported in Table 11. In the Reading Lab at Bass High School, 72 per cent of the participants made gains in skill mastery. The average gain for the students with both pretest and posttest placement scores was 5.6 months. Calculated with a base of seven months lab instruction, the program at Bass accomplished approximately 80 per cent of the behavioral objective. In the Math Lab at Smith High School, 90 per cent of the pupils remaining in the program for the full year demonstrated positive gains. The mean difference between the matched placement scores was 1.2 years or 170 per cent of the behavioral goal.

From the review of the high school Plasment Test scores, it can be concluded that pupils are developing skill mastery in those areas defined on the Prescription Learning criterion-referenced test. Eighty-two per cent of the participants who remain in the high school labs for the full instructional period are able to make significant advancements (.05 level) in their competency levels. During the next year of project implementation, it is anticipated that summative data will be available on students at all three of the high school Learning Labs. Reduction in the mobility rate of high school participants through uniform scheduling practices, additional supportive services, and the identification of appropriate participants (not eligible for Special Education classes) would enable the analysis of a larger percentage of the secondary school participants.

TABLE 11

AVERAGE GAIN FOR LAB PARTICIPANTS
BASED ON CRITERION-REFERENCED TEST

School	Achievement		Mean Difference of Gains in Months (Posttest-Pretest)
	Number of Pupils	Percentage of Pupils	
Bass High			
Total Reading	61	100.0	0.6
Positive Gain	44	72.1	0.9
Negative Gain	17	27.9	-0.2
Smith High			
Total Math	69	100.0	1.2
Positive Gain	62	89.9	1.4
Negative Gain	7	10.1	-0.3

Objective B: To evaluate the effect of EOA High Support services upon participating students, a study of attendance patterns and academic achievement was conducted. The school attendance records of three groups of pupils were compared utilizing records from two consecutive years. A sample of twenty-five high support recipients were compared with a matched sample of Learning Center participants and a matched comparison group. Matching of subjects was determined by past ITBS scores, sex, grade, and race.

Attendance Study Evaluation: For each group, the difference in number of days attended for selected time periods of High Support services as compared to the number of days attended during the same time period in the previous year was computed. The months of November and April were used for the two-year study (1974-75 and 1975-76), with a maximum of forty days per attendance periods. T tests were conducted to determine if High Support services significantly increased the attendance of recipients when compared to the attendance of nonrecipients.

An analysis of the results of the attendance study are presented in Table 12. The data do not indicate the hypothesized attendance increase for High Support counseling recipients. There were no significant differences (.05 level) between the attendance rates of the High Support sample and the attendance of the two other groups. All three samples of students exhibited a slight decrease in their attendance from 1974-75 to 1975-76; however, these decreases are all of comparable magnitude. The average decreases per forty-day periods during the experimental year ranged from approximately one-fourth day for Control Group participants to one-half day for Learning Lab participants.

TABLE 12

COMPARISON OF THE ATTENDANCE CHANGES OF HIGH SUPPORT PARTICIPANTS WITH LEARNING LAB AND CONTROL GROUP STUDENTS

Comparison Group (With High Support)	DF	Mean Difference Between Attendance 1974-75 and 1975-76 t Score
Learning Lab	87	0.24
Control Group	60	0.12

Significant at .05 level.

The average daily attendance for High Support participants during the 1975-76 forty-day study period decreased by about one-third of a day over the previous year. The pupils who were participants in the Counseling component of the project did not realize the improved attendance anticipated from the first year of services. In the present study period, High Support pupils maintained their daily attendance. They did not demonstrate the yearly increase in absenses which could be predicted to result as pupils with both low achievement and school-adaption problems progress through the educational experience. Additional counseling emphasis on school attendance may demonstrate the effectiveness of High Support intervention during the second year of implementation.

Achievement Study Evaluation: For the assessment of the effect of High Support services on pupil performance, an achievement study was conducted. The average gain for each group based on ITBS scores for two consecutive years was computed and compared. It was hypothesized that recipients of High Support services would demonstrate a significantly greater (.05) achievement gain than would nonrecipients.

The grade equivalent scores from the ITBS administration in three areas were compared to determine if the anticipated gains existed for the High Support participants. The pupils scores were examined in Reading, Mathematics, and the test Composite score. The figures presented in Table 13 do not indicate greater achievement increases for the High Support students than for the Learning Lab and Control Group students.

TABLE 13

COMPARISON OF THE IOWA TESTS OF BASIC SKILLS (ITBS) SCORE GAINS OF HIGH SUPPORT PARTICIPANTS WITH LEARNING LAB AND CONTROL GROUP STUDENTS

Comparison Group (With High Support)	DF	Mean Reading Difference t Score	Mean Math Difference t Score	Mean Composite Difference t Score
Learning Lab	67	.69	1.06	0.83
Control Group	54	1.43	.81	1.16

Significant at .05 level.

The achievement results of this preliminary study must be considered within the framework of the thirty-month pilot. While the current data do not identify High Support students as achieving greater gains in skill mastery than the other groups, the scores also show that High Support participants have done as well as their peers. Although the Learning Lab and Control Group students were matched with High Support subjects for research purposes, it was not possible to screen for pupils with comparable social or behavioral problems. In other words, the High Support students were identified for counseling because of problems that may not have existed in the pupils in the matched samples.

In this case, the data can be interpreted in a positive framework. In spite of both behavioral problems and skill deficiencies, the High Support pupils were able to achieve at a level comparable to the other students after seven months of program participation. Subsequent analysis after pupils have been participants for another full year of project implementation should be able to determine if the High Support Services are having a significant effect upon pupil achievement.

Attitudinal Study Evaluation

The Survey of School Attitudes (SSA) was administered to the three student groups in a pretest and posttest experimental design. The results of the tests are reported in Table 14. The comparison was made among the High Support sample, the Learning Lab matched sample, and the Control Group sample. Students were compared on the standardized school-related items and on the social items (designed by the EOA High Support Counseling staff.) The mean differences between the pretest and the posttest scores were analyzed to determine if there were significant differences (.05 level) in attitude changes among the groups.

TABLE 14

COMPARISON OF THE ATTITUDINAL CHANGES OF HIGH SUPPORT PARTICIPANTS WITH LEARNING LAB AND CONTROL GROUP STUDENTS

Comparison Group With High Support	DF	Academic X Difference t Score	Social X Difference t Score
Control Group	59	1.16	0.39
Learning Lab	81	0.00	1.31

Significant at .05 level.

It was hypothesized that the High Support Counseling students would demonstrate a greater improvement in their attitudes towards school and their social environment than would the control students who had not received intensive counseling services. The data do not support the research hypothesis. There were no significant differences between the attitudinal changes computed for the three groups. In both the academic attitude measures and the social attitude measures, pupils did not demonstrate an improvement in their attitudes during the school year. The Survey of School Attitudes was administered after the Learning Labs and the Counseling Program had been in operation from one to two months. The initial testing time may not have been appropriate for the establishment of reliable pretest data. For both the High Support group and the Learning Lab groups, the pretest may have been assessing students' reactions to inclusion in a special program. Variations in program implementation at the five High Support schools also made it difficult to obtain a consistent appraisal of the counseling operation.

Objective C: To determine the cost effectiveness of the Learning Centers when compared to other remedial skills centers within the School System, a cost analysis will be conducted. For a given year of Center operations, a cost effective model will be developed. For each type of Center being assessed, a cost/effectiveness ratio based on instructional costs and reading and mathematics achievement will be calculated. Calculations will use the mean grade equivalent gain of Center participants on the Iowa Tests of Basic Skills (ITBS).

These figures will then be compared with the instructional cost per pupil. An average cost effectiveness figure for each type of Center approach will be derived. It is anticipated that the selected Learning Center approach will be significantly more cost effective (.05 level of significance) than other types of centers used within the Atlanta Public Schools. The statistical analysis to be conducted is dependent upon the number of Center approaches to be included in the evaluation.

Evaluation

During the first year of project implementation, the cost effectiveness figures were computed for the EOA Learning Labs. (See Table 15.)

TABLE 15

COST EFFECTIVENESS OF LEARNING LABS
DURING THE FIRST YEAR OF OPERATIONS

Type of Lab	Number Participants Served*	Cost Per Month of Achievement Gain
Elementary Schools		
Reading	606	$ 47.83
Math	216	$ 57.40
Middle Schools		
Reading	169	$143.50
Math	89	$ 95.67
High Schools**		
Reading	61	$ 47.83
Math	69	$ 23.92

*Enrollment figures are based on number of pupils participating for a complete school year in the Lab program.

**High school calculations are based on gains from the Plasment Criterion-Referenced Test.

It was anticipated that a comparison of these figures with data from other Reading and Mathematics remedial programs would determine the relative cost effectiveness of each type of Center approach. Further study of the problem indicated that it was not feasible to conduct a cost effectiveness comparison after the initial year of implementation. Two major areas of concern became evident during the preliminary investigative states:

1. The Learning Labs have only been in operation for one school year. Comparable programs have been functioning for varying lengths of time. It is not valid to compare a program during its initial year with programs that are not also in their initial year of operations. Since it is not possible to develop the pattern of longitudinal gains based on approximately seven months of instruction, the reliability of the preliminary Learning Lab gains has not been determined. It may be that these initial gains can be attributed to the Hawthorne effect in which pupils scores are influenced by the very fact that these students are now receiving "a special program."

2. The cost expenditures involved in the establishment of Learning Centers is not comparable with the maintenance of these centers. The payment allocation for the Prescription Learning Labs is 50 per cent greater than the payment schedule for the following 18 months of operation. Assessment is made between first-year operations in one type of center and third-year operations in

another type of center; therefore, the cost effectiveness data are not comparable. It is not possible to calculate cost data utilizing establishment expenditures for one type of center and maintenance expenditures for another center.

The determination of the actual cost effectiveness of the Learning Laboratories and the comparison of this figure with other center programs will have to be made after the program has been in operation for a minimum of two school years. At this time, the dollar cost for each month of achievement gain in reading and mathematics can be computed without the experimental threats to internal validity. Assessment at this time will not permit an accurate comparison of the Prescription Learning Labs with other instructional centers operating in the Atlanta Public Schools.

CONCLUSIONS

The Learning Laboratory Program was established and implemented in fourteen schools during the 1975-76 year. The preliminary assessment of the program operations has indicated that the program has functioned in accord with the guidelines stated in the proposal. The initial operational review has also identified positive student outcomes which have resulted from the program implementation. The following conclusions can be drawn from the evaluation of the first year of Lab operations.

1. Fourteen schools were identified by the EOA Education Subcommittee and approved by the Atlanta Public Schools' administration and the EOA Board of Directors.

2. The students selected for Learning Lab participation were all identified by achievement scores or educational referral. The average AAQ of students selected was initially 80.88.

3. In the five schools designated by EOA as recipients of the High Support Counseling Program, 20 at each were selected for participation.

4. Student mobility for Learning Lab participants during the first year of operations was 10.8 per cent; this compared favorably with the system-wide student mobility figure of 27 per cent.

5. The Atlanta Public Schools' staff needed for the administration and operation of the Learning Centers were selected in accord with the designated job descriptions. During the year, only two staff changes occurred; two initially assigned Lab teachers were replaced by substitutions.

6. Teachers and aides involved in the Learning Lab Program participated in an intensive in-service training prior to the Center's opening and also participated in three in-service sessions during the year. The EOA High Support counselors and school principals also received in-service training. All sessions were conducted by the Prescription Learning staff and the Atlanta Public Schools' personnel.

7. The Learning Center Program utilized parents in both a supportive and decision-making capacity during the initial year of operations. The EOA Prescription Learning Advisory Council was organized to improve further the communication process.

The goals of the Learning Laboratory Program were stated in research-oriented behavioral objectives. The accomplishment of these objectives will be determined on an annual basis and with regard to program completion in 1978. The preliminary review of the behavioral objectives has been conducted to determine program effectiveness during the first year of Learning Lab functioning. This measure of the objectives accomplishment has identified both strengths and weaknesses of the Learning Laboratories and the High Support Counseling component:

Objective A1: The achievement gain for Learning Center participants was not significantly greater (.05) than the system-wide achievement gain. (See Table 7.)

Objective A2: Participants in the Learning Centers (elementary and middle schools) gained an average of five months achievement growth in Reading Comprehension and an average of five months achievement growth in Mathematics as measured by the Iowa Tests of Basic Skills. High school participants in the Learning Labs gained an average of six months growth in Reading and an average of 12 months growth in Mathematics as measured by the Prescription Learning Plasment Tests. (See Tables 8, 9, 10 and 11.)

Objective B: A study of school attendance patterns and academic achievement was conducted to determine if High Support recipients had significant (.05) improvements when compared with matched samples of Learning Lab participants and Control Group students. The first-year data did not indicate any differences between groups in attendance, achievement, or attitudes as measured by the Survey of School Attitudes. (See Tables 12, 13, and 14.)

Objective C: The comparison of the cost effectiveness of the Learning Labs with other center approaches was not possible during the initial year of operations. The comparisons will be conducted during the subsequent program years when all costs will be based on maintenance expenditures rather than establishment expenditures. (See Table 15.)

Very few significant problems were experienced during the first year of operations for the Learning Labs Program and the High Support Counseling Component. Three problems area were identified that could be remedied to facilitate progress toward goal achievement.

Problem 1: Communication channels between project personnel from the School System and Economic Opportunity Atlanta were not always operating smoothly. Often staff changes and/or policy revisions were made without adequate notification of the personnel operating in the two agencies.

Problem 2: Participant turnover in the labs at the local schools made it difficult to maintain up-to-date files on the project enrollment. With a yearly project mobility rate of 10.8 per cent, a precise pupil accounting system for both the labs and the counseling component should be applied.

Problem 3: The assessment, as designed for the 1975-76 school year, based all gain analysis on the results of the Iowa Tests of Basic Skills (ITBS). A preliminary examination of the data has indicated that the information is not sufficient for total program evaluation and individual school analyses. Measurement of ITBS achievement gain is currently being conducted; a pretest-posttest measure of learning objective accomplishment would also be beneficial.

Problem 4: The assessment of the High Support Counseling Program that is being conducted by the Atlanta Public Schools does not adequately address the question of participant attitude change. The Survey of School Attitudes was administered after the counseling program had been in operation from one to two months. The initial testing time may not have been appropriate for establishment of reliable pretest data. Variations in program implementation at the five High Support schools also made it difficult to obtain a consistent appraisal of the Counseling Operation.

RECOMMENDATIONS

During the 1976-77 year of project implementation, it is recommended that changes be made in the administrative assessment procedures. These planned changes would contribute to the overall development of a more effective research-demonstration project.

Change 1: The administrative personnel responsible for project operations and evaluation from both agencies should be involved in a central planning meeting. The outcome of this session will be the development of clearly defined communication channels and policy statements regarding all procedures and operations requiring intra-agency cooperation. The difficult areas identified from the first-year implementation will be jointly discussed to develop strategies which will assure expedient and accurate management.

Change 2: A procedure for identifying pupil changes in both the Learning Labs and High Support Component should be specified. Both Lab teachers and EOA counselors will be responsible for assisting the Atlanta Public Schools' Division of Research and Evaluation in implementing an effective enrollment change notification system. All involved personnel should keep a record of pupil withdrawals and additions to the program.

Change 3: Dependent upon the cost involved in the purchase and scoring of test materials, it is anticipated that the Prescription Learning Plasment Test could be administered to all participants. This criterion-referenced measure would be utilized in the pretest-posttest evaluation of all Learning Lab schools. The report from this measure will be comparable to the preliminary data from Bass High School and Smith High School. The use of both a standardized achievement battery (ITBS) and a criterion-referenced instrument should provide sufficient information to conduct both a program assessment, as well as a comparison of achievement in the different lab sites.

APPENDIX A

PROJECT PERSONNEL

Title: Program Director (.25 time position)

Function: Plans, develops, and coordinates the establishment and operation of the Learning Centers. Works cooperatively with central office personnel, school area office personnel, principals, teachers, and EOA staff in project implementation. Assists in the organization of training and follow-up for all of the Learning Center personnel. Maintains administrative and fiscal controls relating to such matters as Center budgets, purchasing, and physical arrangements of the Centers. Supervisor: Assistant Superintendent for Instruction.

Qualifications: Masters Degree, preferably with a major in administration, reading supervision, or a related subject area. Sixth-year Certificate or Doctorate preferred. Demonstrated abilities to coordinate, plan, and supervise all aspects of the program. Previous experience in both an administrative and teaching position with a wide range of responsibility desired.

Title: Reading Coordinator (1 full-time position)

Function: Assists in planning, developing, and coordinating the Reading Centers' activities, participates in the organization and implementation of training, and follow-up for staff working in the Centers. Encourages local community and parent involvement to increase the impact of the total Learning Center Program. Supervisor: Program Director.

Qualifications: Masters Degree in Education, preferably with a major in reading. Sixth-year Certificate preferred. Previous experience in both an administrative and teaching position required.

Title: Mathematics Coordinator (.25 time position)

Function: Assists in planning, developing, and coordinating the Mathematics Skills Centers' activities. Participates in the organization and implementation of training and follow-up for staff working in the main Centers. Encourages local community and parent involvement to increase the impact of the total Learning Center program. Supervisor: Program Director.

Qualifications: Masters Degree in Education, preferably with a major in Mathematics. Sixth-year Certificate preferred. Previous experience in both an administrative and teaching position required.

Title: Research Assistant (1.5 position)

Function: Monitors project and facilitates meeting project objectives, guidelines, and assurances. Takes primary responsibility for executing the proposed research study and in preparing the interim and final evaluation reports. Supervisior: Assistant Superintendent for Research and Evaluation.

Qualifications: Masters Degree or above with training and experience in research and evaluation. Sixth-year Certificate or Doctorate preferred.

Title: Statistician (1 full-time position)

Function: Assists the Research Assistant in gathering and analyzing data. Participates in the administration of evaluation procedures, in observation or project functioning, and in reporting on the information gathered. Supervisor: Research Assistant.

Qualifications: Bachelors Degree with training in statistics.

Title: Lab Teacher — Reading (10 positions)

Function: Facilitates the operation of an effective program through providing leadership and guidance in the usage of the reading curriculum. Selects and schedules qualifying pupils for Center participation. Assists EOA counselors in identifying students for high support services. Maintains adequate evaluation records to determine program effectiveness. Encourages parent involvement in the program. Supervisor: Principal.

Qualifications: A T-4 Certificate in Education. Preferably with a Masters Degree in reading, language arts, or a related area. Must have the ability and skills to work with pupils in a highly individualized curriculum.

Title: Lab Teacher — Mathematics (4 positions)

Function: Facilitates the operation of an effective program through providing leadership and guidance in the usage of the math curriculum. Selects and schedules qualifying pupils for Center participation. Assists EOA counselors in identifying students for high support services. Maintains adequate evaluation records to determine program effectiveness. Encourages parent involvement in the program. Supervisor: Principal.

Qualifications: A T-4 Certificate in Education. Preferably with a Masters Degree in mathematics education. Must have the ability and skills to work with pupils in a highly individualized curriculum.

Title: Educational Aide (14 positions)

Function: To assist teachers in the Reading and the Mathematics Skills Centers. Supervisor: Lab Teacher.

Qualifications: High school training or above, or qualified adults from the immediate school community to be recommended by the Principal.

APPENDIX B

EOA PRESCRIPTION LEARNING ADVISORY COUNCIL

Bass High School	Mrs. Hall Mrs. Turnipseed
Center Hill Elementary School	Mrs. Esteem Allen Rev. C. E. Taylor
Chattahoochee Elementary School	Mrs. Josie Wynn Mrs. Flora Queen
Clement Elementary School	Mrs. Francis Griffin Mrs. Mainer Fowler
Connally Elementary School	Mrs. Ollie Fambrough Mrs. Francis Wilkins
Grove Park Elementary School	Mrs. Shirley Lowrie Mrs. Bennie Travis
Harper High School	Mrs. Ida Dawson Mrs. Essie Mae Bennet
Jerome Jones Elementary School	Mrs. Patricia Babington Mrs. Jessie Hogens
Kirkwood Elementary School	Mrs. Alice Tolver Mrs. Mamie Andrews
Long Middle School	Mrs. Clara Crowley Mrs. G. Bradfield
O'Keefe Middle School	Mrs. Ella Hill Mrs. Margaret Henning
Smith High School	Mrs. Mary Lee Bolden Mrs. Annie Joyce Mobley
Sutton Middle School	Mrs. Janie Smith Mrs. Louise Mintz
Woodson Elementary School	Mrs. Cynthia Lounds Mrs. Henry Taylor Mr. and Mrs. Nathaniel Boaswell